Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 – 16 (cancelled).

Claim 17 (withdrawn): A method which may be used for controlling a burner for heating liquid glass feeders of a glass furnace, said method comprising:

a) feeding at least one burner with a combustible gas and oxygen; and

b) injecting an additional gas as a complement to said oxygen such that the sum of the flow rates for said combustible gas, said oxygen, and said additional gas is greater than or equal to a minimum flow rate for cooling the burner.

Claim 18 (withdrawn): The method of claim 17, wherein said additional gas comprises at least one member selected from the group consisting of:

a) air;

b) carbon dioxide;

c) argon;

d) helium; and

e) nitrogen.

Claim 19 (withdrawn): The method of claim 17, further comprising mixing said additional gas and said oxygen prior to introducing said combustible gas.

Claim 20 (withdrawn): The method of claim 17, wherein said minimum flow rate is set according to the flow rate of said combustible gas.

Claim 21 (withdrawn): The method of claim 17, wherein the sum of the flow rates for said additional gas and said oxygen is greater than or equal to said minimum flow rate.

Claim 22 (withdrawn): The method of claim 17, wherein said flow rate for said additional gas is controlled by a pressure regulator located on a line which delivers oxygen to said burner.

Claim 23 (withdrawn): The method of claim 17, wherein said burner comprises:

a) a first duct for the passage of said oxygen;
b) a second duct for the passage of said combustible gas, wherein:
    1) said second duct is coaxially located substantially inside of said first duct; and
    2) said second duct's end portion is located back from said first duct's end portion.

Claim 24 (withdrawn): The method of claim 17, wherein said burner comprises:

a) a first duct for the passage of said oxygen;
b) a second duct for the passage of said combustible gas, wherein said second duct is coaxially located substantially inside of said first duct;
c) an end-fitting located at said first duct's end portion;
d) a nozzle located at said second duct's end portion; and
e) a combustible gas swirling means, located at said second duct's end portion, to cause said combustible gas to move in a swirling manner.

Claim 25 (withdrawn): The method of claim 24, wherein:

a) said swirling means comprises an object of elongated shape which is centered aerodynamically within said nozzle; and
b) said nozzle has an inside diameter which is greater than the diameter of

said object of elongated shape.

Claim 26 (withdrawn): The method of claim 25, wherein:

a) said object of elongated shape comprises at least one helical rod; and

b) said helical rod is located over a portion of said object's length.

Claim 27 (withdrawn): The method of claim 24, wherein said burner comprises an oxidizer swirling means located on said end-fitting.

Claim 28 (original): An apparatus which may be used as a combustion system, said apparatus comprising:

a) an oxyfuel burner;

b) a means for feeding said burner with fuel;

c) a means for feeding said burner with an oxidizer;

d) an oxygen feed means;

e) an additional gas feed means, wherein said oxidizer feed means cooperates with said oxygen feed means and said additional gas feed means;

f) a means for measuring a flow rate, wherein said flow rate comprises at least one member selected form the group consisting of:

   1) said oxygen's flow rate; and

   2) said fuel's flow rate; and

g) a means for controlling said additional gas's flow rate.

Claim 29 (original): The apparatus of claim 28, wherein said means for controlling said additional gas's flow rate is slaved to said means for measuring a flow rate.

Claim 30 (original): The apparatus of claim 28, wherein said means for controlling said additional gas's flow rate is a pressure regulator.

Claim 31 (original): The apparatus of claim 28, wherein said means for controlling said additional gas's flow rate is a servovalve.

Claim 32 (withdrawn): A method which may be used for heating a liquid glass feeder of a glass furnace, said method comprising, heating at least one liquid glass feeder with a combustion system, wherein:

a) said liquid gas feeder is connected to a glass furnace; and

b) said combustion system comprises:

1) an oxyfuel burner;

2) a means for feeding said burner with fuel;

3) a means for feeding said burner with an oxidizer;

4) an oxygen feed means;

5) an additional gas feed means, wherein said oxidizer feed means cooperates with said oxygen feed means and said additional gas feed means;

6) a means for measuring a flow rate, wherein said flow rate comprises at least one member selected form the group consisting of:

i) said oxygen's flow rate; and

ii) said fuel's flow rate; and

7) a means for controlling said additional gas's flow rate.

Claim 33 (withdrawn): A method which may be used for controlling a burner for heating liquid glass feeders of a glass furnace, said method comprising:

a) feeding at least one burner with a combustible gas and oxygen, wherein said burner comprises:

1) a first duct for the passage of said oxygen;

2) a second duct for the passage of said combustible gas, wherein said second duct is coaxially located substantially inside of said

first duct;

3) an end-fitting located at said first duct's end portion;

4) a nozzle located at said second duct's end portion; and

5) a combustible gas swirling means, located at said second duct's end portion, to cause said combustible gas to move in a swirling manner;

b) injecting an additional gas as a complement to said oxygen such that the sum of the flow rates for said combustible gas, said oxygen, and said additional gas is greater than or equal to a minimum flow rate for cooling the burner, wherein said additional gas is mixed with said oxygen prior to introducing said combustible gas; and

c) controlling said flow rate for said additional gas by a pressure regulator located on a line which delivers oxygen to said burner.